

Appl. No. 10/015,455

Amendment dated May 12, 2004

Reply to Office Action of January 29, 2004

REMARKS

Claims 1, 3, 5, 9, 11 and 13 have been amended by this response. Claims 1, 3, 9 and 11 have been amended to overcome the prior art rejections and place the application in condition for allowance. Claims 5 and 13 have been rewritten in independent form based on the Examiner's indication of allowable subject matter. Claims 1-18 remain in the case and are presented for reconsideration.

The Examiner rejected claims 1 and 17 under 35 USC § 103(a) as being unpatentable over *Kazik* in view of *Dias*. This rejection is respectfully traversed.

The Examiner stated that *Kazik* teaches a carriage with an adjustable torso support 38 for providing lateral support an adjustable headrest support 40 for providing head and neck support. The Examiner stated that the only difference between the claims and *Kazik* is that the claims call the device "an amusement type carriage device." The Examiner further stated that wheelchairs have been used to amuse children by racing down the corridor. He stated that it would have been obvious to amuse handicapped children who spend a lot of time in wheelchairs by racing down the corridor or spinning them about multiple axes. The Examiner relied on *Dias* for the teaching of improving the appearance of the wheelchair to amuse children by applying a decorative body shell that looks like a fire engine, for example. The Examiner concluded that, if not inherent in the *Kazik* device, it would have been obvious to one of ordinary skill in the art to modify *Kazik* to use it as an amusement device by dressing up the wheelchair as taught by *Dias* and racing or spinning the child within the wheelchair to amuse and give the child the freedom or the feeling of motion.

With respect to claim 17, the Examiner stated that a wheelchair is capable of providing yaw by rotating about a vertical axis or weave. He stated that part of the fun of being pushed rapidly

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within a wheelchair is to be spun around or to weave in an unsteady manner. He concluded that this would comprehend a yaw motion and thereby comprehend the claim.

To overcome the Examiner's reliance on wheelchair art for the rejection of the pending claims, applicant has amended the independent claims (claims 1 and 9) to recite that the amusement-type carriage device has a stationary base. The present invention is directed to apparatus for enabling a physically-challenged person to receive vestibular motion therapy, thereby enjoying the types of activities and amusements that persons without handicap can enjoy. Being confined to a wheelchair and being spun around in a wheelchair is not equivalent therapeutically or emotionally to a handicapped individual being able to enjoy amusement rides similar to that which non-handicapped persons can enjoy. To overcome the wheelchair prior art that has been cited by the Examiner against the claims of the present invention, the independent claims 1 and 9 have been amended so that the amusement-type carriage device *has a stationary base*. This clearly differentiates the present invention from any use of a wheelchair to provide vestibular motion therapy that is so important to the physical and emotional well being of a physically-challenged person. More specifically, *Kazik* discloses an orthopedic chair having headrest pads and scoliosis pads, the later to apply appropriate pressure to the seated person's sides to treat curvature of the spine. *Kazik* does not teach an apparatus that includes an amusement-type carriage device having a stationary base. Furthermore, the scoliosis pads provide pressure to the sides of the person. They do not provide lateral support as recited in claim 1. The torso support provides restraint to the physically-challenged person while the amusement-type carriage is in operation. *Dias* teaches a decorative body shell for wheelchairs in which the body shell is physically attached to and moves

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with the wheelchair. Therefore, claim 1 is allowable over the combination of *Kazik* and *Dias*. In addition, claim 17 is allowable for at least the same reasons that claim 1 is allowable.

The Examiner rejected claims 1, 2 and 4 under 35 USC § 103(a) as being unpatentable over *Hickman* in view of *Dias*. This rejection is respectfully traversed. The Examiner stated that *Hickman* teaches a device having a torso support 28, 29, for providing lateral support and adjustable headrest support 50, 51, and a lap belt 38, 39. The Examiner concluded that it would have been obvious to one of ordinary skill in the art to modify the device of *Hickman* to use it as an amusement device by dressing up the wheelchair as taught by *Dias* and racing or spinning the child within the wheelchair to amuse and give the child the feeling of motion.

Hickman discloses a walking trainer device having wheels that enable the training device to be moved in any desired direction. *Hickman* does not teach an apparatus that includes an amusement-type carriage device having a stationary base, as recited in claim 1, as amended. As discussed above, *Dias* teaches a decorative body shell for attachment to wheelchairs that moves with the wheelchair. There is no teaching in either *Hickman* or *Dias* of an amusement-type carriage device having a stationary base. Therefore, claim 1 is allowable over the combination of *Hickman* and *Dias*. Claims 2 and 4 depend from claim 1 and are allowable, at least in part, for the same reasons that claim 1 is allowable over this combination.

The Examiner rejected claims 1 and 3 under 35 USC § 103(a) as being unpatentable over *Suhre* in view of *Keropian* and *Dias*. This rejection is respectfully traversed. The Examiner stated that *Suhre* teaches an adjustable torso support 22 providing lateral support and an adjustable headrest and neck support 32. The Examiner stated that torso support 22 only provides a very limited degree of lateral support for the torso and would only prevent specific lateral movement.

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The Examiner added that the torso support of *Keropian* would provide much more restraining support for the torso by providing anterior and posterior movement restraint. The Examiner stated that *Keropian* teaches rotatable support arms 64, a plurality of vertically supported rods 20 with a plurality of locking screws in clamp 24, a pair of adjustable hand brackets 84 and a pair of hand pads 22. He concluded that it would have been obvious to one of ordinary skill in the art to modify *Suhre* to use torso support as taught by *Keropian* as an obvious equivalent means of restraining the torso of the person with more support and restraint. The Examiner further stated that the wheelchair of *Suhre* is capable of being used to amuse children by racing and spinning the child within the wheelchair. The Examiner stated that it would have been obvious to one of ordinary skill in the art to further modify the device of *Suhre* to use it as an amusement device by dressing up the wheelchair as taught by *Dias* and racing and spinning the child within the wheelchair to amuse and give the child the feeling of motion.

None of the references cited by the Examiner in this rejection teach or suggest an amusement-type carriage device having a stationary base. *Suhre* discloses a wheelchair having a plurality of posture supports for adjustably supporting the neck, thoracic cavity, and thighs. Each of the posture supports is independently and three-dimensionally adjustable so as to therapeutically support a wheelchair bound individual. *Suhre* does not disclose an apparatus that includes an amusement-type carriage device having a stationary base as recited in amended claim 1. *Keropian* discloses a trunk support for use with wheelchairs and the like having contoured trunk support plates disposed laterally of and in supporting contact with the patient's trunk. The plates secured to the backrest of the chair are universally moveable for adjustment to the patient's size and shape, and are locked in the supporting position. There is no teaching in *Keropian* of an amusement-type

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carriage device having a stationary base. As discussed above, *Dias* simply teaches the use of decorative body shells for attachment to wheelchairs. In addition, since *Suhre*, *Keropian*, and *Dias* fail to teach an amusement-type carriage device having a stationary base, with the device being modified to provide torso support and headrest support to a physically-challenged person to provide motion therapy, claim 1 is allowable over the combination of *Suhre*, *Keropian*, and *Dias*. Claim 3 depends from claim 1 and is allowable for at least the same reasons.

The Examiner rejected claims 1 and 6 - 8, under 35 USC § 103(a) as being unpatentable over *Tomita, et al.* This rejection is respectfully traversed.

The Examiner stated that *Tomita, et al.* teaches an apparatus having an adjustable torso support 1260 mounted on the carriage and a headrest support 1280. With reference to Fig. 4, the Examiner stated that each torso support 1260 is designed for each person. He further stated that the torso support would press the user to the seat, and lateral arms of the U-shaped torso support 1260 would provide lateral support. He further stated that it would prevent the user from sliding from one side of the chair to the other. The Examiner stated that the torso support 1260 would be adjustable to accommodate different sized people by locking in different positions. The Examiner further stated that *Tomita* appears silent with regard to the adjustability of the headrest, but adds that providing an adjustable headrest to accommodate different sized users would have been an obvious provision to one of ordinary skill in the art. With respect to claim 6 and 7, the Examiner stated that details of the operation of the simulation device are well within the realm of the artisan of ordinary skill. With regard to claim 8, the Examiner stated that *Tomita, et al.* teaches that the appearance of the device can take any desired appearance, in that simulating animals or cartoon characters is one of the conventional appearances used for these devices.

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Tomita, et al. discloses a rocking device and bodily sensation simulation apparatus. Three driving means are provided to control pitch, roll, and heave of the rocking object. A lock arm 1260 is provided for each seat 1240 and is a means for fixing by pressing the user who is in a sitting state on the seat 1240 or the spare seat 1242 (col. 3, ll. 59 - 61). The user sits on the seat 1240 or the spare seat 1242 with a lock arm 1260 in an upward state and, for example, the user pulls down an operating end 1262 of the lock arm 1260 in one or both hands, whereby the user's head is inserted within the U-shaped portion of the operating end 1262 of the lock arm 1260. The user's trunk (shoulders to stomach) is held with the L-shaped and U-shaped portions of the operating end 1262 of the lock arm 1260 (col. 4, ll. 5 - 13). A locking arm that presses the user into a seated position in a rocking device is not a teaching of an adjustable torso support mounted on the amusement-type carriage device for providing lateral support to the physically-challenged person while seated on the carriage device when the carriage device is operating as recited in claim 1. Claim 1 has been amended further to recite that the adjustable torso support includes a pair of rotatable support arms. The lack of a pair of rotatable support arms as part of an adjustable torso support distinguishes the present invention from the teachings of *Tomita, et al.* Therefore, claim 1 is allowable over *Tomita, et al.* Claims 6 - 8 depend from claim 1 and are allowable, at least in part, for the same reasons that claim 1 is allowable over this reference.

The Examiner rejected claims 9, 14 - 16 and 18 under 35 USC § 103(a) as being unpatentable over *Coleman* in view of *Dias*. This rejection is respectfully traversed. The Examiner stated that *Coleman* teaches a wheelchair that has an adjustable seat attached to a base by spring mechanism 24. He stated that safety belt S provides lateral support and adjustably supports the torso and hip. The Examiner also stated that the headrest 7C also is adjustable. The Examiner

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further stated that the wheelchair of *Coleman* is capable of being used to amuse children by racing it and spinning the child within the wheelchair. He concluded that it would have been obvious to one of ordinary skill in the art to further modify the device of *Coleman* to use it as an amusement device by dressing up the wheelchair as taught by *Dias* and racing or spinning the child within the wheelchair to amuse and give the child the feeling of motion.

Coleman discloses an automated wheelchair constructed to provide a therapeutic effect and calibrated to accommodate at least three seating configurations for a specific user. *Coleman* does not teach an apparatus that includes an amusement-type carriage device having a stationary base as recited in amended claim 9. *Dias* teaches a decorative body shell for attachment to wheelchairs that moves with the wheelchair. Therefore, claim 9 is allowable over the combination of *Coleman* and *Dias*. Claims 14 – 16 and 18 depend from claim 9 and are allowable, at least in part, for the same reasons that claim 9 is allowable over the combination of *Coleman* and *Dias*.

The Examiner rejected claim 10 under 35 USC § 103(a) as being unpatentable over *Coleman* and *Dias* as applied to claim 9, and further in view of *Sigafoo*. This rejection is traversed.

The Examiner stated that *Coleman* teaches at column 8, lines 57 – 60, that additional belts may be needed to help secure the person when moving from a sitting position to a standing position. The Examiner further states that *Sigafoo* teaches the convention of providing shoulder straps in addition to the hip support for helping to secure the person in the wheelchair. The Examiner concluded that it would have been obvious to one of ordinary skill in the art to further modify *Coleman* to include additional straps such as shoulder straps, as taught by *Sigafoo* to better secure the person within the wheelchair.

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As noted with respect to the rejection of claim 9, *Coleman* does not teach an amusement-type carriage device having a stationary base. Furthermore, although *Sigafoo* discloses a travel chair for elderly and physically handicapped persons and the use of conventional restraint devices, such as aircraft and automotive seatbelts, there is no teaching or suggestion of the use of such restraint devices with an amusement-type carriage device as recited in claim 9. Therefore, claim 10, which depends from claim 9, is allowable over the combination of *Coleman* and *Sigafoo*.

The Examiner rejected claim 11 under 35 USC § 103(a) as being unpatentable over *Coleman* and *Dias* as applied to claim 9, and further in view of *Keropian*. This rejection is respectfully traversed.

The Examiner stated that *Coleman* teaches, at column 8, lines 57 – 60, that additional belts may be needed to secure the person when moving from a sitting position to a standing position. The Examiner stated that *Keropian* teaches additional straps, including a pair of support arms as noted above for adding support for the person within the wheelchair. The Examiner concluded that it would have been obvious to one of ordinary skill in the art to further modify *Coleman* to include additional straps such as the rotatable support arms and pair of pads as taught by *Keropian* to provide additional support for the person during transport and movement from a sitting position to a standing position.

The recitation of "a pair of rotatable support arms," previously recited in claim 11, has been added as a limitation of claim 9. Claim 9 has already been distinguished from the combination of *Coleman* and *Dias* on the basis that the invention on the basis that the invention claims an amusement-type carriage device having a stationary base. This excludes the combination *Coleman* and *Dias* from making the present invention obvious over this combination. Furthermore,

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Keropian discloses a trunk support for use with wheelchairs having contoured trunk support plates disposed laterally, and in supporting contact with the patient's trunk. The plates are secured to the backrest of the chair, are universally moveable for adjustment to the patient's size and shape, and are locked in the supporting position. There is no teaching in *Keropian* of an adjustable torso and hip support mounted on the amusement-type carriage device and including a pair of rotatable support arms for providing lateral support to the physically-challenged person when seated on the device during operation. Therefore, claim 11 is allowable over the combination of *Coleman*, *Dias*, and *Keropian*.

The Examiner rejected claim 12 under 35 USC § 103(a) as being unpatentable over *Coleman* and *Dias* as applied to claim 9, and further in view of *Kornberg*. This rejection is traversed.

The Examiner stated that *Coleman* teaches that headrest 7C is adjustable to accommodate a specific neck condition. The Examiner further stated that the headrest appears to be merely height adjustable. The Examiner relies on *Kornberg* for a teaching of a headrest that is adjustable in the depth direction as well. The Examiner concluded that it would have been obvious to one of ordinary skill in the art to further modify *Coleman* to include a headrest adjustment means as taught by *Kornberg* to provide an additional degree of adjustability to the headrest to accommodate different neck conditions.

As noted above, *Coleman* discloses an automated wheelchair constructed to provide a therapeutic effect and calibrated to accommodate at least three seating configurations for a specific user. *Coleman* does not teach or suggest an apparatus that includes an amusement-type carriage device having a stationary base, as recited in amended claim 9, from which claim 12 depends.

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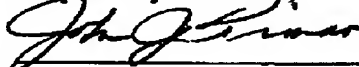
Kornberg discloses a headrest support for a wheelchair that is adjustable in horizontal and vertical planes. There is no teaching in *Kornberg* of an amusement-type carriage device having a stationary base. Since *Coleman*, *Dias*, and *Kornberg* fail to teach an amusement-type carriage device having a stationary base and modified to provide an adjustable headrest mechanism for a physically-challenged person to provide motion therapy, claim 12 is allowable over the combination of these patents.

The Examiner indicated the allowability of claims 5 and 13 if rewritten in independent form, including all the limitations of the base claims and any intervening claims. Accordingly, claims 5 and 13 have been rewritten in independent form.

In view of the above, it is respectfully requested that the Examiner consider this response after final action and enter this amendment. It is believed that this amendment addresses the outstanding claim rejections in such a way that all of the prior art cited against the rejected claims has been appropriately distinguished. Consequently, it is believed that the pending claims, as amended are in condition for allowance. Such action at an early date is earnestly solicited. It is also requested that the Examiner contact Applicant's undersigned attorney at the telephone number listed below should this response not be deemed to place the application in condition for allowance.

5/12/04
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Respectfully submitted,



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